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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,051	11/10/2004	Akihiko Ito	2593-0150PUS1	8417
2292	7590	10/20/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			VELEZ, ROBERTO	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/512,051

Applicant(s)

ITO ET AL.

Examiner

Roberto Velez

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

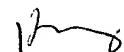
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



**HA TRAN NGUYEN**  
**SUPERVISORY PATENT EXAMINER**

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/21/2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/05/2006 has been entered.

### ***Response to Arguments***

2. In view of applicant's arguments, the rejection(s) of claim(s) 14-18 under 102(b) as being anticipated by ***Maeng (US Pat. 6,563,331)*** has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of ***Sakai (US Pat. 5,650,732)***.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-13 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Maeng (US Pat. 6,563,331)*** in view of ***Sakai (US Pat. 5,650,732)***.

Regarding claim 11, **Maeng** shows (Figures 1-4) a test and burn-in apparatus, in-line system using the test and burn-in apparatus, and test method using the in-line system comprising: at least one moving means [34, 36, 38, 40] capable of gripping a plurality of said strip formats [10] at a loading position of pre-test electronic devices (Column 7, Lines 58-60), while conveying said gripped strip formats [10] to said contact portions [23] without reloading said electronic devices from said strip formats [10], and (Column 8, Lines 1-8) while pressing (inherently, in order to connect the input/output terminals to said contact portions, there must be some pressing action involved to complete the task) input/output terminals of said electronic devices against said contact portions [23] at the same time while said electronic devices are being loaded on said strip formats [10].

**Maeng** fails to disclose at least one moving means capable of simultaneously gripping a plurality of said strip formats. However, **Sakai** discloses (Column 5, Lines 18-25) at least one moving means [21] capable of simultaneously gripping a plurality of said strip formats [9].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of **Sakai** into the device of **Maeng** by having at least one moving means capable of simultaneously gripping a plurality of said strip formats. The ordinary artisan would have been motivated to modify **Maeng** in the manner set forth above for the purpose of improving the equipment operation ratio because the lot size operation in a time can be doubled or more without any limit.

Regarding claim 12, the combination of **Maeng** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** shows (Figures 1-4) wherein said moving means [34, 36, 38, 40] is capable of freely selecting the gripping number [10] within the number able to be gripped (Column 8, Lines 35-38 and 45-47).

Regarding claim 13, the combination of **Maeng** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** shows (Figures 1-4) wherein said moving means [34, 36, 38, 40] is capable (Column 8, Lines 35-38 and 45-47) of freely selecting the gripping number [10] being independent from other means (each moving means works independently).

Regarding claim 16, the combination of **Maeng** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** shows (Figures 1-4) wherein each of said moving means [34, 36, 38, 40] grips and moves (Column 8, Lines 35-38 and 45-47) said strip format [10] from said contact portions [23] to a loading (using 34, 36, 38, 40) position of post-test electronic devices.

Regarding claim 17, the combination of **Maeng** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** discloses (Column 8, Lines 22-26) wherein a sum of the numbers of contact portions in said test head [23] is  $2^n$ .

Regarding claim 18, the combination of **Maeng** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** discloses (Column 8, Lines 22-26) wherein  $n=5$  or  $n=6$ .

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maeng** (**US Pat. 6,563,331**) and **Sakai** (**US Pat. 5,650,732**) as applied to claim 11, and further in view of **Kim et al.** (**US Pat. 6,518,745**).

Regarding claim 14, combination of **Maeng** and **Sakai** discloses everything as claimed above in claim 11.

The combination of **Maeng** and **Sakai** fails to disclose wherein said any two or more moving means among said plurality of moving means have a substantially overlapping operation range on a contact group as a set of said contact portions. However, **Kim et al.** shows (Fig. 1) wherein said any two or more moving means [33, 32] among said plurality of moving means have a substantially overlapping operation range on a contact group [21, 22, 23] as a set of said contact portions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of **Kim et al.** into the device of the combination of **Maeng** and **Sakai** by having an overlapping operation range on a contact group among a plurality of moving means. The ordinary artisan would have been motivated to modify the combination of **Maeng** and **Sakai** in the manner set forth above for the purpose of providing a faster way to test all the semiconductor devices.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Velez whose telephone number is 571-272-8597. The examiner can normally be reached on Monday-Friday 8:00am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Ha can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Velez  
Patent Examiner



HA TRAN NGUYEN  
SUPERVISOR OF PATENT EXAMINER